

Partial Translation of Reference 2

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(First Embodiment)

An explanation will be given of an information providing system according to the first embodiment of the present invention. FIG. 1 is a view showing the construction of the information providing system according to the present embodiment. The information providing system includes user terminals 10, internet 20, retrieval server 30, URL database 40, and advertising database 50.

Each of the user terminals 10 exemplifies "terminal" described in the claims of the present invention. The user terminals 10 are connected with the retrieval server 30 via the internet 20 so as to retrieve information on the internet 20, particularly, information on web pages provided by www servers 60 and receive relevant information such as advertisement provided by the retrieval server 30 as well as search results.

The retrieval server 30 exemplifies "information providing apparatus" described in the claims of the present invention. The retrieval server 30 retrieves information on web pages stored in the URL database 40 on the basis of a search criterion received from the user terminal 10, to combine the web page information with relevant information such as advertisements stored in the advertising database 50, and transmits obtained composite information as search results to the user terminal 10.

The URL database 40 exemplifies "providing information database" described in the claims of the present invention. The URL database 40 stores therein URL information concerning web pages provided by the www servers 60 on the internet as providing information.

The advertising database 50 exemplifies "relevant information database" in the

claims of the present invention. The advertising database 50 stores therein advertising image data such as banner advertisements and advertising information, including the URLs of the web pages that provide detailed advertising information, as relevant information.

The www server 60 provides the user terminals 10 with web pages via the internet 20. The URLs of the web pages provided by the www servers 60 are stored in the URL database 40. Each user terminal 10 can perform data search using the retrieval server 30.

FIG. 2 is a function block diagram of the retrieval server 30. The retrieval server 30 includes search criteria receiver 302, URL retrieval unit 304, advertising information combining unit 306, and search result transmitter 308. The retrieval server 30 also has database retrieval unit (not shown) to search the URL database 40 and advertising database 50, to thereby perform data reading, writing and updating.

The search criteria receiver 302 receives search criteria for searching web pages from the user terminals 10. Used are the following search criteria:

Keywords logical expression expressing keywords contained in the web pages by OR and AND; language criteria specifying a language such as Japanese language, English language, and the like, used in the web pages; date criteria specifying a scope of creation date or refix date of the web pages; data type criteria specifying a data type, including image, audio, video, and the like; and search destination criteria specifying a range of the searching web pages. The search destination range may be specified by country name or regional name, such as Japan, Asia, USA, Europe, and so on, domain name of internet, such as ad.jp domain, co.jp domain, com domain, and so on, or part of URL addresses of directories and the like, in which web server names or web pages are stored. The search criteria that the search criteria receiver 302 receives can be composite criteria combining the aforementioned search criteria together.

The retrieval server 30 provides a user interface for entering and selecting search logical expression and search criteria so that the user can easily establish a search criterion. Further, it may be so configured that the user terminal 10 transmits the search criterion established by the user to the retrieval server 30.

The URL retrieval unit 304 retrieves, from the URL database 40, web page URL

information that coincides with the search criterion on the basis of the search criterion received by the search criteria receiver 302. The thus extracted URL information contains web page topics, web page URLs and web page descriptive texts. The web page text may show the first few lines of the web page or a part of the description of the web page.

The advertising information combining unit 306 extracts, from the advertising database 50, advertising information associated with the URL information retrieved by the URL retrieval unit 304 and creates composite information obtained by combining the URL information with advertising information. The composite information is created in such a way that the advertising information is displayed in the vicinity of the URL information, so that the relevance between the URL information and the advertising information can be easily recognized by the user. If there are multiple pieces of URL information thus retrieved, the composite information is created in such a way that the URL information is displayed in the form of list and advertising information is displayed as an item of the list in the vicinity of the associated URL information. The composite information is created in html document format.

The advertising information associated with the URL information is, for example, advertising images of banner advertisements and the like, which are widely used on web pages. The banner advertising images are linked to web pages containing detailed information of the advertisements. When the user clicks on a banner advertising image using, e.g., a mouse of the user terminal 10, that person can access the web pages that provide detailed advertising information in accordance with the link associated with that banner advertising image.

The search result transmitter 308 transmits, to the user terminal 10, composite information including the URL information and advertising information associated with each other as search results based on the search criterion given by the user. The user terminal 10 displays a list of URL information as the search results as well as banner advertising images associated with pieces of the URL information.

With a view to enhance advertising effects, the banner advertising images should preferably be located in the vicinity of web page topics, web page URLs and web page descriptive texts of the retrieved URL information. Because the user is

concerned with the URL information displayed as a result of searching, that person is likely to move his or her observing point to the web page topics, web page URLs and web page descriptive texts, and thus toward the banner advertising images located at near sites, with a high possibility that he or she consults relevant advertising information. Further, since the user often lays a pointing means of a mouse or the like, close to the web page topics and URLs in an attempt to access the web pages represented as the search results, the locating of the banner advertising images right beside the web page topics and URLs allows the user to readily click on the banner advertising image, with a higher possibility of his or her consulting relevant advertising information.

If there are multiple search results, pieces of URL information, for example, 10 items are listed at a time, and then next 10 items as far as the user refers to. If there exists no advertising information associated with the retrieved URL information, no banner advertising image is added to the URL information. That means that not all URL information listed is added with a banner advertisement.

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FIG. 6 is an explanatory diagram showing a data format of advertising information stored in the advertising database 50. The advertising information has web page URLs providing advertisement IDs, registration criteria, advertising images, and advertising information. First advertising information is configured by an advertisement ID of 100001, a registration criterion of "(tennis OR golf OR soccer") AND (sports wear OR shoes)", banner advertising image 501 as advertising image, and the URL of <http://www.vwx.com/index.htm>. The provider of this advertising information is a sales outlet for sports wears and sporting goods, and in order to promote the sales of sports wears and sporting goods, establishes the above registration criteria. Accordingly, the provider can request a display of the banner advertising image 501 associated with the retrieved URL information, when the web page URL information describing the sports wears or shoes of any one of the tennis, golf and soccer is displayed as a search result retrieved by the user.

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FIG. 9 is an explanatory view showing search results displayed on the screen of the user terminal 10. When the user accesses the retrieval server 30 through the user terminal 10, field 420 is displayed, to which search terms are entered as a search criterion. Upon designating a search option (not shown), the user can enter complicate composite criteria. In the present embodiment, the user enters the search terms, "soccer AND shoes". When the user presses search button 422 on the screen of the user terminal 10 using a mouse or the like, the entered search terms are transmitted to the retrieval server 30, where a search for the URL information that coincides with the search terms is started. As a result of the searching, 2340 pieces of URL information are extracted and are displayed on the screen of the user terminal 10 in the form of a list that presents 10 items of the URL information at a time.

The first URL information displayed as a search result consists of a web page topic such as "exhaustive side-by-side evaluation of soccer shoes manufacturers", a URL such as <http://www.abc.ne.jp/soccer-shoes.htm>, and a part of a descriptive text extracted from the relevant web page. The URL, that is, <http://www.abc.ne.jp/soccer-shoes.htm>, is hyperlinked from the topic of the web page by a user's mouse button click. The banner advertising image 501 is displayed as one list item right beside the topic. The banner advertising image 501 is the advertising image of the advertisement ID 100001, and as explained referring to FIG. 6, the registration criterion corresponds to the search terms "(tennis OR golf OR soccer)" AND (sports wear OR shoes)". The web page of the first URL information contains keywords such as soccer and shoes, which coincide with the registration criterion of the advertising information of the advertising ID 100001. Thus, the banner advertising image 501 of the advertising ID 100001 is displayed in association with the first URL information.